

WHAT IS CLAIMED IS:

1. A method for validating an electronic transmission, the method
5 comprising the steps of:
generating a group key for encrypting and signing an electronic message
transmitted on a network;
establishing a group key name corresponding to the group key for
encrypting and signing the electronic message transmitted to a group of clients on the
10 network;
transmitting a data packet, the data packet including the group key name,
the electronic message and a signature to authenticate the electronic message and protect
and group key name;
receiving the data packet; and
15 validating the group key name in the received data packet.
2. The method set forth in claim 1 further comprising the step of adding the
group key name and the message authentication signature to a packet name extension
prior to the step of transmitting.
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3. The method set forth in claim 1 wherein the step of transmitting includes
transmitting in accordance with an 802.11 protocol.
4. The method set forth in claim 1 further comprising the step of establishing
25 an authenticated relationship.
5. The method set forth in claim 4 wherein the step of establishing an
authenticated relationship employs a handshake protocol.
- 30 6. The method set forth in claim 1 wherein the step of validating further

includes the step of comparing the received group key name to a group key name table.

5 7. The method set forth in claim 6 further comprising the steps of:
 establishing a local group key name; and
 storing the locally established group key name in the group key name
table.

10 8. The method set forth in claim 1 further comprising the step of encrypting
the multicast message prior to transmission.

 9. The method set forth in claim 1 further comprising the step of decrypting
the received multicast message if the received group key name matches an entry in the
group key name table.

15 10. The method set forth in claim 1 further comprising the step of discarding
the received multicast message if the received group key name does not match an entry in
the group key name table.

20 11. A system for targeting multicast transmission, the system comprising:
 means for generating a group key for signing a multicast message
transmitted via a network;
 means for generating a group key name for naming the group key;
 means for combining the group key name to the multicast message to form
a multicast packet;
25 means for transmitting the multicast packet to a receiver via the network;
 means for receiving the multicast packet;
 means for validating the received group key name contained within the
received multicast packet; and
 means for determining the intended group recipients based upon the

validated group key name.

12. The system set forth in claim 11 wherein the means for determining further includes means for comparing to a local group name table.

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13. The system set forth in claim 11 wherein the means for transmitting the management frame packet is an IEEE 802.11 protocol.

14. The system set forth in claim 11 wherein the means for generating a group key is in accordance with an IEEE 802.1 pre-standard.

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15. The system set forth in claim 11 wherein the group key name is a unique identifying element.

15 16. An article of manufacture embodied in a computer-readable medium for use in a processing system for transmitting electronic messages to and/or from a network, the article comprising:

a group key generation logic for causing a processing system to generate a group key for encrypting and signing an electronic message transmitted on a network;

20 a group key name generation logic for causing a processing system to generate a group key name for encrypting and signing the electronic message transmitted on the network;

a data transmitting logic for causing a processing system to transmit the electronic message to a group of clients on the network; and

25 a message receiving logic for causing a processing system to verify whether a receiving client is an intended recipient of the electronic message.

17. The article as set forth in claim 16 wherein the data transmitting logic includes an IEEE 802.11 protocol.

18. The article as set forth in claim 16 wherein the message receiving logic further includes means for causing a processing system to compare a received group key name with a local key name table.

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